We claim:

1. A method of fracturing a subterranean formation comprising the steps of:

providing a fracturing fluid comprising a viscosifier; and a fluid loss control additive that comprises a deformable, degradable material; and

contacting the formation with the fracturing fluid so as to create or enhance at least one fracture therein.

2. The method of claim 1 further comprising the step of removing the fracturing fluid from the subterranean formation.

3. The method of claim 1 wherein the deformable, degradable material comprises a degradable polymer.

4. The method of claim 3 wherein the degradable polymer comprises a polysaccharide, a chitin, a chitosan, a protein, an aliphatic polyester, a poly(glycolide), a poly(lactide), a poly(ε-caprolactone), a poly(hydroxybutyrate), a polyanhydride, an aliphatic polycarbonate, a poly(orthoester), a poly(amino acid), a poly(ethylene oxide), or a poly(phosphazene).

5. The method of claim 1 wherein the deformable, degradable material further comprises a plasticizer or a stereoisomer of a poly(lactide).

6. The method of claim 5 wherein the stereoisomer of a poly(lactide) comprises a mixture of a D and L stereoisomers of poly(lactide).

7. The method of claim 1 wherein the deformable, degradable material comprises poly(lactic acid).

8. The method of claim 1 wherein the deformable, degradable material has a particle size distribution in the range of from about 1 micron to about 1,000 microns.

9. The method of claim 1 wherein the deformable, degradable material has a particle size distribution in the range of from about 100 microns to about 850 microns.

10. The method of claim 1 wherein the deformable, degradable material has a median particle size of about 200 microns.

11. The method of claim 1 wherein the fluid loss control additive comprising the deformable, degradable material is present in the fracturing fluid in an amount in the range of from about 0.01% to about 2% by weight of the fracturing fluid.

12. The method of claim 1 wherein the deformable, degradable material further comprises a hydrated organic or inorganic solid compound.

13. The method of claim 12 wherein the fluid loss control additive comprising the deformable, degradable material deforms to obstruct pores in the formation.

14. The method of claim 12 wherein the hydrated organic or inorganic solid compound comprises sodium acetate trihydrate, L-tartaric acid disodium salt dihydrate, sodium citrate dihydrate, sodium tetraborate decahydrate, sodium hydrogen phosphate heptahydrate, sodium phosphate dodecahydrate, amylose, a starch-based hydrophilic polymer, a cellulose-based hydrophilic polymer, or a mixture thereof.

15. The method of claim 1 wherein the fracturing fluid further comprises a base fluid.

16. The method of claim 15 wherein the base fluid is water, oil, or a mixture thereof.

17. The method of claim 15 wherein the base fluid is present in the fracturing fluid in an amount in the range of from about 30% to about 99% by weight of the fracturing fluid.

18. The method of claim 1 wherein the viscosifier comprises a biopolymer, a cellulose derivative, or a mixture thereof.

19. The method of claim 18 wherein the biopolymer comprises xanthan, succinoglycan, or a mixture thereof.

20. The method of claim 18 wherein the cellulose derivative comprises hydroxyethylcellulose, guar, a guar derivative, or a mixture thereof.

21. The method of claim 20 wherein the guar derivative is hydroxypropyl guar.

22. The method of claim 1 wherein the viscosifier is present in the fracturing fluid in an amount in the range of from about 0.01% to about 1.0% by weight of the fracturing fluid.

23. The method of claim 1 wherein the fracturing fluid further comprises a buffer compound.

24. The method of claim 23 wherein the buffer compound is calcium carbonate, ammonium acetate, or magnesium oxide.

25. The method of claim 1 wherein the fracturing fluid further comprises a de-emulsifier, a salt, a crosslinking agent, a clay inhibitor, a proppant, an acid, a breaker, a bactericide, caustic, or a mixture thereof.

26. A method of controlling fluid loss during fracturing of a subterranean formation, comprising the step of adding to a fracturing fluid a fluid loss control additive comprising a deformable, degradable material.

27. The method of claim 26 wherein the fracturing fluid comprises a viscosifier and a base fluid.

28. The method of claim 26 wherein the deformable, degradable material comprises a degradable polymer.

29. The method of claim 28 wherein the degradable polymer comprises a polysaccharide, a chitin, a chitosan, a protein, an aliphatic polyester, a poly(glycolide), a poly(lactide), a poly(ε-caprolactone), a poly(hydroxybutyrate), a polyanhydride, an aliphatic polycarbonate, a poly(orthoester), a poly(amino acid), a poly(ethylene oxide), or a poly(phosphazene).

30. The method of claim 26 wherein the deformable, degradable material further comprises a plasticizer or a stereoisomer of a poly(lactide).

31. The method of claim 30 wherein the stereoisomer of a poly(lactide) comprises a mixture of a D and L stereoisomer of the poly(lactide).

32. The method of claim 26 wherein the deformable, degradable material comprises poly(lactic acid).

33. The method of claim 26 wherein the deformable, degradable material has a particle size distribution in the range of from about 1 micron to about 1,000 microns.

34. The method of claim 26 wherein the deformable, degradable material has a particle size distribution in the range of from about 100 microns to about 850 microns.

35. The method of claim 26 wherein the deformable, degradable material has a median particle size of about 200 microns.

36. The method of claim 26 wherein the fluid loss control additive comprising the deformable, degradable material is present in the fracturing fluid in an amount in the range of from about 0.01% to about 2% by weight of the fracturing fluid.

37. The method of claim 26 wherein the deformable, degradable material further comprises a hydrated organic or inorganic solid compound.

38. The method of claim 37 wherein the fluid loss control additive comprising the deformable, degradable material deforms to obstruct pores in the formation.

39. The method of claim 37 wherein the hydrated organic or inorganic solid compound comprises sodium acetate trihydrate, L-tartaric acid disodium salt dihydrate, sodium citrate dihydrate, sodium tetraborate decahydrate, sodium hydrogen phosphate heptahydrate, sodium phosphate dodecahydrate, amylose, a starch-based hydrophilic polymer, a cellulose-based hydrophilic polymer, or a mixture thereof.

40. The method of claim 27 wherein the base fluid is water, oil, or a mixture thereof.

41. The method of claim 27 wherein the base fluid is present in the fracturing fluid in an amount in the range of from about 30% to about 99% by weight of the fracturing fluid.

42. The method of claim 27 wherein the viscosifier comprises a biopolymer, a cellulose derivative, or a mixture thereof.

43. The method of claim 27 wherein the viscosifier is present in the fracturing fluid in an amount in the range of from about 0.01% to about 1.0% by weight of the fracturing fluid.

44. The method of claim 27 wherein the fracturing fluid further comprises a buffer compound.

45. The method of claim 44 wherein the buffer compound is calcium carbonate, ammonium acetate, or magnesium oxide.

46. The method of claim 27 wherein the fracturing fluid further comprises a de-emulsifier, a salt, a crosslinking agent, a clay inhibitor, a proppant, an acid, a breaker, a bactericide, caustic, or a mixture thereof.

47. A method of minimizing fluid loss in a subterranean formation comprising using a fluid loss control additive comprising a deformable, degradable material to obstruct at least one pore throat in the formation.

48. The method of claim 47 wherein the deformable, degradable material comprises a degradable polymer.

49. The method of claim 48 wherein the degradable polymer comprises a polysaccharide, a chitin, a chitosan, a protein, an aliphatic polyester, a poly(glycolide), a poly(lactide), a poly(ε-caprolactone), a poly(hydroxybutyrate), a polyanhydride, an aliphatic polycarbonate, a poly(orthoester), a poly(amino acid), a poly(ethylene oxide), or a poly(phosphazene).

50. The method of claim 47 wherein the deformable, degradable material further comprises a plasticizer or a stereoisomer of a poly(lactide).

51. The method of claim 50 wherein the stereoisomer of a poly(lactide) comprises a mixture of a D and L stereoisomer of the poly(lactide).

52. The method of claim 47 wherein the deformable, degradable material comprises poly(lactic acid).

53. The method of claim 47 wherein the deformable, degradable material has a particle size distribution in the range of from about 1 micron to about 1,000 microns.

54. The method of claim 47 wherein the deformable, degradable material has a particle size distribution in the range of from about 100 microns to about 850 microns.

55. The method of claim 47 wherein the deformable, degradable material has a median particle size of about 200 microns.

56. The method of claim 47 wherein the fluid loss control additive comprising the deformable, degradable material is present in a fracturing fluid in an amount in the range of from about 0.01% to about 2% by weight of the fracturing fluid.

57. The method of claim 47 wherein the deformable, degradable material further comprises a hydrated organic or inorganic solid compound.

58. The method of claim 58 wherein the fluid loss control additive comprising the deformable, degradable material deforms to obstruct pores in the formation.

59. The method of claim 57 wherein the hydrated organic or inorganic solid compound comprises sodium acetate trihydrate, L-tartaric acid disodium salt dihydrate, sodium

citrate dihydrate, sodium tetraborate decahydrate, sodium hydrogen phosphate heptahydrate, sodium phosphate dodecahydrate, amylose, a starch-based hydrophilic polymer, a cellulose-based hydrophilic polymer, or a mixture thereof.

60. A fracturing fluid comprising:

a viscosifier; and

a fluid loss control additive comprising a deformable, degradable material.

61. The fracturing fluid of claim 60 wherein the fracturing fluid further comprises a base fluid.

62. The fracturing fluid of claim 61 wherein the base fluid comprises water, oil, or a mixture thereof.

63. The fracturing fluid of claim 61 wherein the fracturing fluid further comprises a de-emulsifier, a salt, a crosslinking agent, a clay inhibitor, a proppant, an acid, a breaker, a bactericide, caustic, or a mixture thereof.

64. The fracturing fluid of claim 60 wherein the deformable, degradable material comprises a degradable polymer.

65. The fracturing fluid of claim 64 wherein the degradable polymer comprises a polysaccharide, a chitin, a chitosan, a protein, an aliphatic polyester, a poly(glycolide), a poly(lactide), a poly(ε-caprolactone), a poly(hydroxybutyrate), a polyanhydride, an aliphatic polycarbonate, a poly(orthoester), a poly(amino acid), a poly(ethylene oxide), or a poly(phosphazene).

66. The fracturing fluid of claim 60 wherein the deformable, degradable material has a particle size distribution in the range of from about 1 micron to about 1,000 microns.

67. The fracturing fluid of claim 66 wherein the deformable, degradable material has a particle size distribution in the range of from about 100 microns to about 850 microns.

68. The fracturing fluid of claim 66 wherein the deformable, degradable material has a median particle size of about 200 microns.

69. The fracturing fluid of claim 60 wherein the fluid loss control additive comprising the deformable, degradable material is present in the fracturing fluid in an amount in the range of from about 0.01% to about 2% by weight of the fracturing fluid.

70. The fracturing fluid of claim 60 wherein the deformable, degradable material further comprises a hydrated organic or inorganic solid compound.

71. The fracturing fluid of claim 70 wherein the hydrated organic or inorganic solid compound comprises sodium acetate trihydrate, L-tartaric acid disodium salt dihydrate, sodium citrate dihydrate, sodium tetraborate decahydrate, sodium hydrogen phosphate heptahydrate,

sodium phosphate dodecahydrate, amylose, a starch-based hydrophilic polymer, a cellulose-based hydrophilic polymer, or a mixture thereof.

72. The fracturing fluid of claim 71 wherein the base fluid is present in the fracturing fluid in an amount in the range of from about 30% to about 99% by weight of the fracturing fluid.

73. The fracturing fluid of claim 60 wherein the viscosifier comprises a biopolymer, a cellulose derivative, or a mixture thereof.

74. The fracturing fluid of claim 60 wherein the viscosifier is present in the fracturing fluid in an amount in the range of from about 0.01% to about 1.0% by weight of the fracturing fluid.

75. The fracturing fluid of claim 61 wherein the fracturing fluid further comprises a buffer compound.

76. The fracturing fluid of claim 75 wherein the buffer compound is calcium carbonate, ammonium acetate, or magnesium oxide.

77. A fluid loss control additive comprising a deformable, degradable material.

78. The fluid loss control additive of claim 77 wherein the deformable, degradable material comprises a degradable polymer.

79. The fluid loss control additive of claim 78 wherein the degradable polymer comprises a polysaccharide, a chitin, a chitosan, a protein, an aliphatic polyester, a poly(glycolide), a poly(lactide), a poly(ε-caprolactone), a poly(hydroxybutyrate), a polyanhydride, an aliphatic polycarbonate, a poly(orthoester), a poly(amino acid), a poly(ethylene oxide), or a poly(phosphazene).

80. The fluid loss control additive of claim 77 wherein the deformable, degradable material further comprises a plasticizer or a stereoisomer of a poly(lactide).

81. The fluid loss control additive of claim 80 wherein the stereoisomer of a poly(lactide) comprises a mixture of the D and L stereoisomers of the poly(lactide).

82. The fluid loss control additive of claim 77 wherein the deformable, degradable material comprises poly(lactic acid).

83. The fluid loss control additive of claim 77 wherein the deformable, degradable material has a particle size distribution in the range of from about 1 micron to about 1,000 microns.

84. The fluid loss control additive of claim 77 wherein the deformable, degradable material has a particle size distribution in the range of from about 100 microns to about 850 microns.

85. The fluid loss control additive of claim 77 wherein the deformable, degradable material has a median particle size of about 200 microns.

86. The fluid loss control additive of claim 77 wherein the deformable, degradable material further comprises a hydrated organic or inorganic solid compound.

87. The fluid loss control additive of claim 86 wherein the hydrated organic or inorganic solid compound comprises sodium acetate trihydrate, L-tartaric acid disodium salt dihydrate, sodium citrate dihydrate, sodium tetraborate decahydrate, sodium hydrogen phosphate heptahydrate, sodium phosphate dodecahydrate, amylose, a starch-based hydrophilic polymer, a cellulose-based hydrophilic polymer, or a mixture thereof.